UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,197	04/06/2001	Richard D. Webb	1930.0070003	5381

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EXAMINER
YIGDALL, MICHAEL J

ART UNIT	PAPER NUMBER
2192	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	09/827,197	WEBB, RICHARD D.
Office Action Summary	Examiner	Art Unit	
	Michael J. Yigdall	2192	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _03 March 2005_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _17-27_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _17-27_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 20050601

DETAILED ACTION

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on March 3, 2005 has been entered. Claims 17-27

are pending.

Response to Arguments

2.   Applicant's arguments with respect to claims 17-27 have been considered but are moot in

view of the new ground(s) of rejection necessitated by Applicant's amendments.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

4.   Claims 17-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

Claims 17-21 recite a system for describing structure of programming languages. The

system is not limited to tangible embodiments, and is therefore not considered statutory. For

example, the language of the claims suggests that the system may be implemented in software

alone without the use of any computer hardware.

Claims 22-27 recite a method for describing computer programs. The method is not

tangibly embodied and is an abstract idea that may be performed merely as a mental exercise,

and is therefore not considered statutory. Although claim 23 implies a machine ("the form is

machine-executable"), the language of the claims does not suggest that the method includes any

step of machine execution.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 17 and 19-25 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

Pat. No. 5,675,801 to Lindsey (art made of record, "Lindsey").

With respect to claim 17 (currently amended), Lindsey discloses a system for describing

structure of programming languages (see, for example, the abstract), comprising:

(a) first program code written in a first object-oriented programming language, said first

program code having first program elements (see, for example, column 7, lines 1-19, which

shows a source code template or first program code that includes first program elements in a

target language or a first object-oriented programming language);

(b) second program code written in a second object-oriented programming language

different from said first object-oriented programming language, said second program code

having second program elements (see, for example, column 6, lines 32-40, which shows second

program code that includes second program elements in a second object-oriented programming

language such as Smalltalk), wherein said second program elements include definitions of

objects and descriptions of at least one of inheritance, connections, and encapsulation between

said objects (see, for example, column 6, lines 40-48, which shows that the second program

includes definitions of objects and descriptions of connections), and said objects can be accessed

and modified by said first program elements (see, for example, column 9, lines 16-37, which

shows that the first program elements can access and modify the objects); and

(c) a programming tool for converting said second program code from said second

object-oriented programming language to said first object-oriented programming language to

produce a converted second program code (see, for example, column 6, lines 55-67, which shows

a generator tool or a programming tool for converting the second program code from the second

object-oriented programming language to the first object-oriented programming language).

With respect to claim 19 (currently amended), the rejection of claim 17 is incorporated,

and Lindsey further discloses the limitation wherein input and verification parameters are

specified in said second object-oriented programming language (see, for example, column 9,

lines 38-41, which shows an input parameter such as a name and a verification parameter such as

an allowable length specified in the second object-oriented programming language).

With respect to claim 20 (original), the rejection of claim 17 is incorporated, and Lindsey

further discloses the limitation wherein said programming tool is a compiler (see, for example,

column 10, lines 43-46, which shows that the programming tool may include a compiler).

With respect to claim 21 (original), the rejection of claim 17 is incorporated, and Lindsey further discloses the limitation wherein said programming tool is a translator (see, for example, column 9, lines 42-48, which shows that the programming tool is translator).

With respect to claim 22 (currently amended), Lindsey discloses a method for describing computer programs by retaining meta-information about program elements, thereby allowing optimization and functionality on multiple hardware and software platforms (see, for example, the abstract), comprising the following steps:

(a) creating a first program containing first program elements using a first object-oriented programming language (see, for example, column 7, lines 1-19, which shows creating a source code template or a first program that includes first program elements in a target language or a first object-oriented programming language);

(b) creating a second program containing second program elements using a second object-oriented programming language different from said first object-oriented programming language (see, for example, column 6, lines 32-40, which shows creating a second program that includes second program elements in a second object-oriented programming language such as Smalltalk), wherein said second program include definitions of objects and descriptions of at least one of inheritance, connections, and encapsulation between said objects (see, for example, column 6, lines 40-48, which shows that the second program includes definitions of objects and descriptions of connections), and said objects can be accessed and modified by said first program elements (see, for example, column 9, lines 16-37, which shows that the first program elements can access and modify the objects); and

(c) converting said second program into a form of said first object-oriented programming language (see, for example, column 6, lines 65-67, which shows converting the second program into a form of the first object-oriented programming language).

With respect to claim 23 (original), the rejection of claim 22 is incorporated, and Lindsey further discloses the limitation wherein the form is machine-executable (see, for example, column 10, lines 43-46, which shows that the form is prepared for execution and is thus machine-executable).

With respect to claim 24 (currently amended), the rejection of claim 22 is incorporated, and Lindsey further discloses wherein the form is said first object-oriented programming language (see, for example, column 6, lines 55-67, which shows that the form is the first object-oriented programming language).

With respect to claim 25 (currently amended), the rejection of claim 22 is incorporated, and Lindsey further discloses the limitation wherein results of said step (a) and said step (b) are placed into one file (see, for example, column 9, lines 49-50, which shows inputting or placing results of the first program into the parser file, and column 10, lines 3-7, which shows returning or placing results of the second program into the parser file), wherein step (c) is preceded by a step of copying said second program from the file into a temporary file (see, for example, column 10, lines 3-7, which shows copying the second program into a temporary cache file), wherein step (c) includes converting said second program of said temporary file into said first object-oriented programming language to produce a converted second program (see, for example, column 10, lines 7-10, which shows converting the second program in the temporary

cache file), and wherein step (c) is followed by a step of combining said converted second

program with said first program (see, for example, column 10, lines 31-38, which shows

combining the programs into source code files).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey, as

applied to claim 17 above, in view of U.S. Pat. No. 6,675,370 to Sundaresan (art of record,

"Sundaresan").

        With respect to claim 18 (currently amended), the rejection of claim 17 is incorporated,

and Lindsey further discloses the limitation wherein compiler pragmas are automatically added

to said first program code and said converted second program code (see, for example, column 8,

lines 52-65, which shows generator directives or pragmas added to the program code, and

column 10, lines 43-46, which shows that the generator may include a compiler).

        Lindsey does not expressly disclose the limitation wherein copyright text and CCDoc

directives are automatically added to said first program code and said converted second program

code. However, Sundaresan discloses automatically adding Javadoc directives to the program

code to provide documentation (see, for example, column 3, lines 1-10). Javadoc directives are

analogous to CCDoc directives, and indeed Sundaresan discloses adding documentation to other

object-oriented programming languages such as C++ (see, for example, column 5, lines 43-49).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to supplement the system of Lindsey with CCDoc directives, such as suggested by

Sundaresan, so as to automatically provide documentation for the program code. It would also

have been obvious to one of ordinary skill in the art to include copyright text in such

documentation, so as to identify the owner of the program code.

9.   Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey, as

applied to claim 25 above, in view of U.S. Pat. No. 6,546,549 to Li (art of record, "Li").

With respect to claim 26 (original), the rejection of claim 25 is incorporated, but Lindsey

does not expressly disclose the limitation wherein the file is a header file.

However, Li discloses generating header files (see, for example, the header files in F4, F5

and F6 in FIGS. 1 and 2, and column 6, lines 1-24) to adapt the program code to plurality of

execution environments by source code transformation (see, for example, column 4, lines 18-22).

The program code is object-oriented (see, for example, column 5, lines 27-57).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to use the header file of Lindsey as a header file, such as taught by Li, so as to adapt

the program code to a plurality of execution environments.

10.   Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey in view

of Li, as applied to claim 26 above, and further in view of *Microsoft Press Computer Dictionary,*

Third Edition (art of record, "Dictionary").

With respect to claim 27 (original), the rejection of claim 26 is incorporated, but Li in view of Li does not expressly disclose the limitation wherein the header file comprises the following sections: Definitions, User Preamble, User Pre-object, User Member, User Postobject, and User Postamble.

However, header files are well known in the art to include definitions of data types and declarations of variables used in a program (see, for example, Dictionary, page 229, "header file"). For example, a header file may define a class (i.e., a Definitions section) and its data members (i.e., a User Member section), and may include comments to describe the header file and to specify the use of the class objects and methods (i.e., User Preamble, Pre-object, Postobject and Post-amble sections).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the header file of Lindsey in view of Li to comprise Definitions, User Preamble, User Pre-object, User Member, User Postobject and User Postamble sections, because it is well known in the art that header files may comprise such sections to describe elements of a program.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. U.S. Pat. No. 6,298,389 to Gerhardt discloses a method for input and output of structures for the Java language. U.S. Pat. No. 5,428,792 to Conner et al. discloses a system for producing language neutral objects and generating an interface between the objects and multiple computer languages.

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael J. Yigdall whose telephone number is (571) 272-3707.

The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

                                    MY   Michael J. Yigdall
                                                    Examiner
                                                    Art Unit 2192

mjy

                                            TUAN DAM
                                   SUPERVISORY PATENT EXAMINER